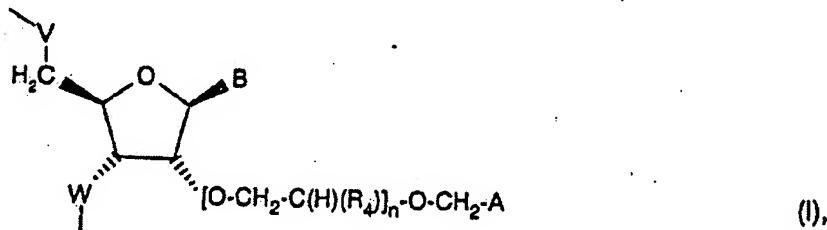


Amendments to the Claims

This Listing of the Claims will replace all prior versions, and listings, of claims in the application.

Listing of the Claims:

1. (Currently Amended) An oligonucleotide derivative comprising at least one nucleoside building block of the formula (I)



in which

A is a radical of the formula  $-C(H)(R_3)-N(R_1)(R_2)$ , in which

$R_1$  and  $R_2$  are, independently of each other,

H,

$C_1-C_{10}$ alkyl,

a radical of the formula (II)



in which each X is, in each case independently of each other, O or  $N(R_6)$ ,  $R_5$  and  $R_6$  are, in each case independently of each other, H,  $C_1-C_{10}$ alkyl, amino- $C_2-C_{10}$ alkyl, N-mono- $C_1-C_{10}$ alkylamino- $C_2-C_{10}$ alkyl or N,N-di- $C_1-C_{10}$ alkylamino- $C_2-C_{10}$ alkyl, and m is an integer from 1 up to and including 3,

amino- $C_3-C_{10}$ alkyl,

N-mono- $C_1-C_{10}$ alkylamino- $C_3-C_{10}$ alkyl, or

N,N-di- $C_1-C_{10}$ alkylamino- $C_3-C_{10}$ alkyl; or in which

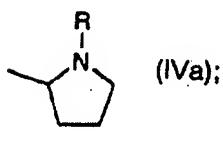
$-N(R_1)(R_2)$  are together a radical of the formula (III),



in which Y is O, S,  $SO$ ,  $SO_2$  or  $N(R_7)$ , and  $R_7$  is H or  $-CH_3$ ;

$R_3$  is H,  $-CH_3$ ,  $-CH_2CH_3$ ,  $-CH_2OH$  or  $-CH_2-O-C_1-C_4$ alkyl; or

A is a radical of the formula (IVa) or (IVb).



in which R, independently, has the meaning of R<sub>1</sub>, or R<sub>2</sub>, and U is O or CH<sub>2</sub>;

R<sub>4</sub> is H, -CH<sub>3</sub>, -CH<sub>2</sub>CH<sub>3</sub>, -CH<sub>2</sub>OH or -CH<sub>2</sub>-O-C<sub>1</sub>-C<sub>4</sub>alkyl;

n is 0, 1 or 2;

B is the radical of a nucleic acid base; and

V and W are, independently of each other, the same or different radicals of an internucleosidic bridging group or are a terminal radical;

and a salt thereof;

where those compounds are excepted in which, in the radical A, two heteroatoms are linked to the same carbon atom.

2. (Previously Presented) The oligonucleotide derivative according to claim 1, in which A is a radical of the formula -C(H)(R<sub>3</sub>)-N(R<sub>1</sub>)(R<sub>2</sub>), in which

R<sub>1</sub> and R<sub>2</sub> are, independently of each other, H, C<sub>1</sub>-C<sub>5</sub>alkyl, amino-C<sub>2</sub>-C<sub>5</sub>alkyl, N-mono-C<sub>1</sub>-C<sub>3</sub>alkylamino-C<sub>2</sub>-C<sub>5</sub>alkyl, N,N-di-C<sub>1</sub>-C<sub>3</sub>alkylamino-C<sub>2</sub>-C<sub>5</sub>alkyl or a radical of the formula II



in which X is O or N(R<sub>6</sub>), R<sub>5</sub> and R<sub>6</sub> are, independently of each other, H, C<sub>1</sub>-C<sub>3</sub>alkyl, amino-C<sub>2</sub>-C<sub>3</sub>alkyl, N-mono-C<sub>1</sub>-C<sub>3</sub>alkylamino-C<sub>2</sub>-C<sub>5</sub>alkyl or N,N-di-C<sub>1</sub>-C<sub>3</sub>alkylamino-C<sub>2</sub>-C<sub>5</sub>alkyl, and m is 1.

3. (Previously Presented) The oligonucleotide derivative according to claim 2, in which R<sub>1</sub> and R<sub>2</sub> are, independently of each other, H, methyl, ethyl, aminoethyl, aminopropyl, N-monomethylaminoethyl, N-monomethylaminopropyl, N-monoethylaminoethyl, N-monoethylaminopropyl, N,N-dimethylaminoethyl, N,N-dimethylaminopropyl, N,N-diethylaminoethyl, N,N-diethylaminopropyl, or a radical of the formula II



in which X is O or N(R<sub>6</sub>), R<sub>5</sub> and R<sub>6</sub> are, independently of each other, H, methyl, ethyl or propyl, and m is 1.

4. (Previously Presented) The oligonucleotide derivative according to claim 3, in which R<sub>1</sub> and R<sub>2</sub> are, independently of each other, H, methyl, ethyl, aminoethyl, N-monomethylaminoethyl, N-monoethylaminoethyl, N,N-dimethylaminoethyl or N,N-diethylaminoethyl.

5. (Previously Presented) The oligonucleotide derivative according to claim 4, in which

$R_1$  and  $R_2$  are, independently of each other, H, methyl or ethyl.

6. (Previously Presented) The oligonucleotide derivative according to claim 5, in which  
 $R_1$  and  $R_2$  are in each case H, or  
 $R_1$  and  $R_2$  are in each case methyl, or  
one of the substituents  $R_1$  and  $R_2$  is H and the other is methyl.

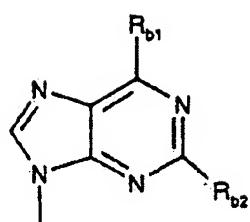
7. (Previously Presented) The oligonucleotide derivative according to claim 5, in which  
 $R_1$  and  $R_2$  are in each case methyl, or  
one of the substituents  $R_1$  and  $R_2$  is H and the other is methyl.

8. (Previously Presented) The oligonucleotide derivative according to claim 1, in which  
 $R_3$  and  $R_4$  are, independently of each other, H, -CH<sub>3</sub>, -CH<sub>2</sub>OH or -CH<sub>2</sub>-O-CH<sub>3</sub>.

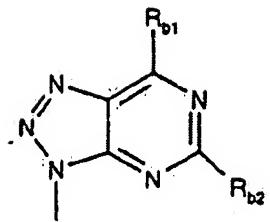
9. (Previously Presented) The oligonucleotide derivative according to claim 1, in which n is 0.

10. (Previously Presented) The oligonucleotide derivative according to claim 9, in which  
A is a radical of the formula -C(H)(R<sub>3</sub>)-N(R<sub>1</sub>)(R<sub>2</sub>), in which  
 $R_3$  is H, and  $R_1$  and  $R_2$  are defined as in claim 1.

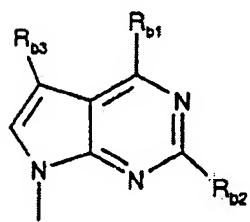
11. (currently amended) The oligonucleotide derivative according to claim 1, in which  
B is a radical of any of the formula formulas (V1) to (V14)



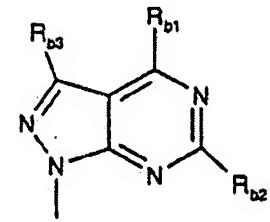
(V1),



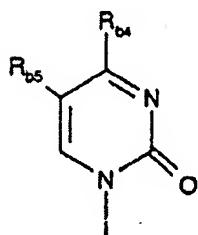
(V2),



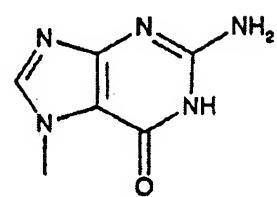
(V3),



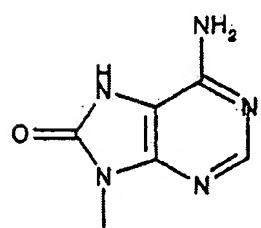
(V4),



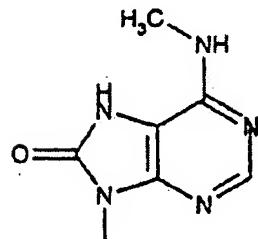
(V5),



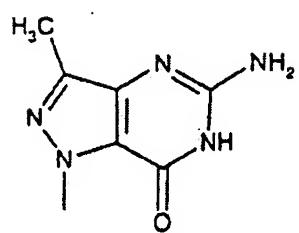
(V6),



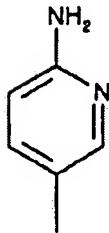
(V7),



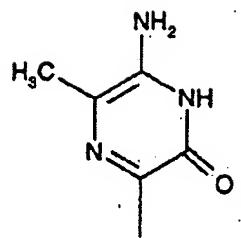
(V8),



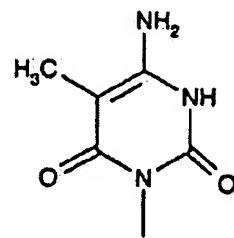
(V9),



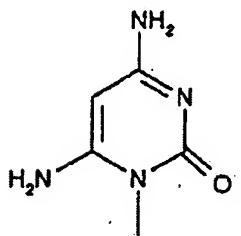
(V10),



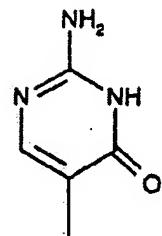
(V11),



(V12),



(V13),



(V14)

in which

$R_{b1}$  is  $-\text{NH}_2$ ,  $-\text{SH}$  or  $-\text{OH}$ ;

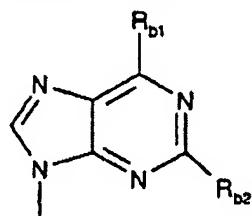
$R_{b2}$  is  $\text{H}$ ,  $-\text{NH}_2$  or  $-\text{OH}$ ; and

$R_{b3}$  is  $\text{H}$ ,  $\text{Br}$ ,  $\text{I}$ ,  $-\text{CN}$ ,  $-\text{C}\equiv\text{C-CH}_3$ ,  $-\text{C}(\text{O})\text{NH}_2$  or  $-\text{CH}_3$ ;

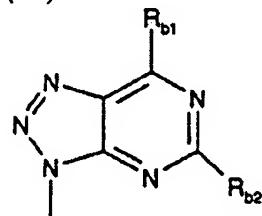
$R_{b4}$  is  $-\text{NH}_2$  or  $-\text{OH}$ ; and

$R_{b5}$  is  $\text{H}$ ,  $\text{F}$ ,  $\text{Br}$ ,  $\text{I}$ ,  $-\text{CN}$ ,  $-\text{C}\equiv\text{C-CH}_3$ ,  $-\text{C}(\text{O})\text{NH}_2$  or  $-\text{CH}_3$ .

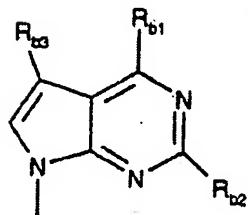
12. (Previously Presented) The oligonucleotide derivative according to claim 11, in which B is a radical of the formula (V1), (V2), (V3), (V4) or (V5)



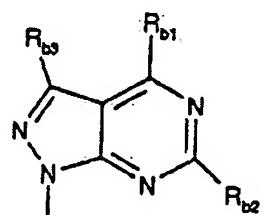
(V1),



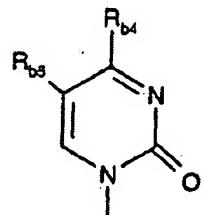
(V2),



(V3),



(V4),



(V5)

in which

$R_{b1}$  is  $-NH_2$ ,  $-SH$  or  $-OH$ ;

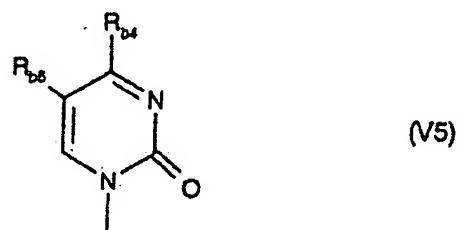
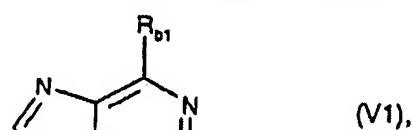
$R_{b2}$  is  $H$ ,  $-NH_2$  or  $-OH$ ; and

$R_{b3}$  is H, Br, I, -CN,  $-C\equiv C-CH_3$ ,  $-C(O)NH_2$  or  $-CH_3$ .

$R_{b4}$  is  $-NH_2$  or  $-OH$ ; and

$R_{b5}$  is H, F, Br, I, -CN, -C≡C-CH<sub>3</sub>, -C(O)NH<sub>2</sub>, or -CH<sub>3</sub>.

13. (Previously Presented) The oligonucleotide derivative according to claim 12, in which B is a radical of the formula (V1) or (V5)



in which

$R_{D1}$  is  $-NH_2$ ,  $-SH$  or  $-OH$ ;

$R_{p2}$  is H, -NH<sub>2</sub> or -OH;

$R_{b4}$  is  $-NH_2$  or  $-OH$ ; and

$R_{b5}$  is H, F, Br, I, -CN, -C≡C-CH<sub>3</sub>, -C(O)NH<sub>2</sub>, or -CH<sub>3</sub>.

14. (Previously Presented) The oligonucleotide derivative according to claim 13, in which B is selected from the group of the following radicals: xanthine, hypoxanthine, adenine, 2-aminoadenine, guanine, 6-thioguanine, uracil, thymine, cytosine, 5-methylcytosine, 5-propynyluracil, 5-fluorouracil and 5-propynylcytosine.

15. (Previously Presented) The oligonucleotide derivate according to claim 1, in which V and W, as radicals of an internucleosidic bridging group, are, independently of each other, selected from the following group: 5'-O-P(O)(OH)-O-3' (phosphodiester), 5'-O-P(O)(SH)-O-3' (phosphorothioate), 5'-O-P(S)(SH)-O-3' (phosphodithioate), 5'-O-P(O)(CH<sub>3</sub>)-O-3' (methylphosphonate), 5'-O-P(O)(NH-R<sub>7</sub>)-O-3' (phosphoamidate) in which R<sub>7</sub> is C<sub>1</sub>-C<sub>3</sub>alkyl, 5'-O-P(O)(OR<sub>8</sub>)-O-3' (phosphotriester) in which R<sub>8</sub> is C<sub>1</sub>-C<sub>3</sub>alkyl, 5'-O-S(O)<sub>2</sub>-CH<sub>2</sub>-3' (sulfonate), 5'-O-S(O)<sub>2</sub>-NH-3' (sulfamate), 5'-NH-S(O)<sub>2</sub>-CH<sub>2</sub>-3' (sulfonamide), 5'-CH<sub>2</sub>-S(O)2-CH<sub>2</sub>-3' (sulfone), 5'-O-S(O)-O-3' (sulfite), 5'-CH<sub>2</sub>-S(O)-CH<sub>2</sub>-3' (sulfoxide), 5'-CH<sub>2</sub>-S-CH<sub>2</sub>-3' (sulfide), 5'-O-CH<sub>2</sub>-O-3' (formacetal), 5'-S-CH<sub>2</sub>-O-3' (3'-thioformacetal), 5'-O-CH<sub>2</sub>-S-3' (5'-thioformacetal), 5'-CH<sub>2</sub>-CH<sub>2</sub>-S-3' (thioether), 5'-CH<sub>2</sub>-NH-O-3' (hydroxylamine), 5'-CH<sub>2</sub>-N(CH<sub>3</sub>)-O-3' (methylene(methylimino)), 5'-CH<sub>2</sub>-O-N(CH<sub>3</sub>)-3' (methyleneoxy(methylimino)), 5'-O-C(O)-NH-3' (5'-N-carbamate), 5'-CH<sub>2</sub>-C(O)-NH-3' (amide), 5'-NH-C(O)-CH<sub>2</sub>-3' (amide II), 5'-CH<sub>2</sub>-NH-C(O)-3' (amide III) and 5'-C(O)-NH-CH<sub>2</sub>-3' (amide IV), and the tautomeric forms thereof.

16. (Previously Presented) The oligonucleotide derivative according to claim 15, in which

V and W, as radicals of an internucleosidic bridging group, are, independently of each other, selected from the following group: 5'-O-P(O)(OH)-O-3' (phosphodiester), 5'-O-P(O)(SH)-O-3' (phosphorothioate) and 5'-CH<sub>2</sub>-C(O)-NH-3' (amide).

17. (Previously Presented) The oligonucleotide derivative according to claim 16, in which one of the radicals V or W, as radicals of an internucleosidic bridging group, is 5'-O-P(O)(OH)-O-3' (phosphodiester) and the other radical is 5'-O-P(O)(SH)-O-3' (phosphorothioate).

18. (Previously Presented) The oligonucleotide derivative according to claim 16, in which V and W as radicals of an internucleosidic bridging group, are in each case 5'-O-P(O)(OH)-O-3' (phosphodiester) or in each case 5'-O-P(O)(SH)-O-3' (phosphorothioate).

19. (Previously Presented) The oligonucleotide derivative according to claim 1, in which V and W, as terminal radicals, are, independently of each other, -OH, -NH<sub>2</sub> or a hydroxyl or amino group which is protected by a protecting group.

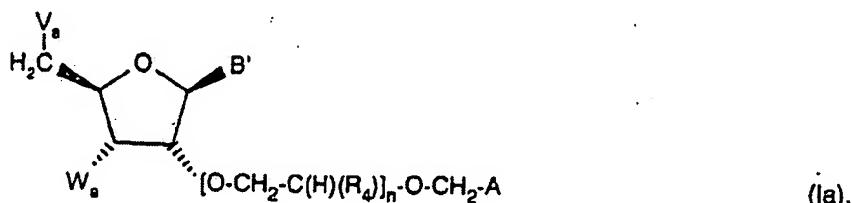
20. (Previously Presented) The oligonucleotide derivative according to claim 17, in which V, as terminal radical, is -OH, -NH<sub>2</sub> or a protected hydroxyl or amino group, and, W is -OH or -NH<sub>2</sub>.

21. (Previously Presented) The oligonucleotide derivative according to claim 1, which has a length of from 3 to 50 nucleoside building blocks.

22. (Previously Presented) The oligonucleotide derivative according to claim 18, which has a length of from 10 to 25 nucleoside building blocks.

23. (Previously Presented) The oligonucleotide derivative according to claim 1, wherein the oligonucleotide derivative has a chimeric structure.

24. (Original) A compound of the formula (Ia)



in which

A is a radical of the formula -C(H)(R<sub>3</sub>)-N(R<sub>1</sub>)(R<sub>2</sub>), in which

R<sub>1</sub> and R<sub>2</sub> are, independently of each other,

H,

$C_1-C_{10}$ alkyl,

a radical of the formula II



in which each X is, in each case, independently of each other, a or  $N(R_6)$ ,  $R_5$  and  $R_6$  are, in each case, independently of each other, H,  $C_1-C_{10}$ alkyl, amino- $C_2-C_{10}$ alkyl, N-mono- $C_1-C_{10}$ alkylamino- $C_2-C_{10}$ alkyl, or N,N-di- $C_1-C_{10}$ alkylamino- $C_2-C_{10}$ alkyl; and m is an integer from 1 up to and including 3,

amino- $C_3-C_{10}$ alkyl,

N-mono- $C_1-C_{10}$ alkylamino- $C_3-C_{10}$ alkyl, or

N,N-di- $C_1-C_{10}$ alkylamino- $C_3-C_{10}$ alkyl; or in which

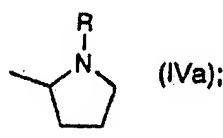
$-N(R_1)(R_2)$  are together a radical of the formula (III)



in which Y is O, S, SO,  $SO_2$  or  $N(R_7)$ , and  $R_7$  is H or  $-CH_3$ ;

$R_3$  is H,  $-CH_3$ ,  $-CH_2CH_3$ ,  $-CH_2OH$  or  $-CH_2-O-C_1-C_4$ alkyl; or

A is a radical of the formula (IVa) or (IVb)



in which R, independently, has the meaning of  $R_1$  or  $R_2$ , and U is O or  $CH_2$ ;

$R_4$  is H,  $-CH_3$ ,  $-CH_2CH_3$ ,  $-CH_2OH$  or  $-CH_2-O-C_1-C_4$ alkyl;

n is 0, 1 or 2;

B' is the radical of a protected or unprotected nucleic acid base; and

$V_a$  and  $W_a$  are, independently of each other,  $-OH$ ,  $-NH_2$  or identically or differently protected hydroxyl or amino groups,

where those compounds are excepted in which, in the radical A, two heteroatoms are linked to the same carbon atom,

and where other reactive groups are present in the protected or unprotected state.

25. (Previously Presented) The compound according to claim 24, in which

A is a radical of the formula  $-C(H)(R_3)-N(R_1)(R_2)$ , in which

$R_1$  and  $R_2$  are, independently of each other, H,  $C_1-C_5$ alkyl, amino- $C_2-C_5$ alkyl, N-Mono- $C_1-C_3$ alkylamino- $C_2-C_5$ alkyl, N,N-di- $C_1-C_3$ alkylamino- $C_2-C_5$ alkyl or a radical of the formula II



in which X is O or N(R<sub>6</sub>), R<sub>5</sub> and R<sub>6</sub> are, independently of each other, H, C<sub>1</sub>-C<sub>3</sub>alkyl, amino-C<sub>2</sub>-C<sub>3</sub>alkyl, N-mono-C<sub>1</sub>-C<sub>3</sub>alkylamino-C<sub>2</sub>-C<sub>5</sub>alkyl or N,N-di-C<sub>1</sub>-C<sub>3</sub>alkylamino-C<sub>2</sub>-C<sub>5</sub>-alkyl, and m is 1.

26. (Previously Presented) The compound according to claim 25, in which R<sub>1</sub> and R<sub>2</sub> are, independently of each other, H, methyl, ethyl, aminoethyl, aminopropyl, N-monomethylaminoethyl, N-monomethylaminopropyl, N-monoethylaminoethyl, N-monoethylaminopropyl, N,N-dimethylaminoethyl, N,N-dimethylaminopropyl, N,N-diethylaminoethyl, N,N-diethylaminopropyl, or a radical of the formula II



in which X is O or N(R<sub>6</sub>), R<sub>5</sub> and R<sub>6</sub> are, independently of each other, H, methyl, ethyl or propyl and m is 1.

27. (Previously Presented) The compound according to claim 26, in which R<sub>1</sub> and R<sub>2</sub> are, independently of each other, H, methyl, ethyl, aminoethyl, N-monomethylaminoethyl, N-monoethylaminoethyl, N,N-dimethylaminoethyl or N,N-diethylaminoethyl.

28. (Previously Presented) The compound according to claim 27, in which R<sub>1</sub> and R<sub>2</sub> are, independently of each other, H, methyl or ethyl.

29. (Previously Presented) The compound according to claim 28, in which R<sub>1</sub> and R<sub>2</sub> are in each case H, or R<sub>1</sub> and R<sub>2</sub> are in each case methyl, or one of the substituents R<sub>1</sub> and R<sub>2</sub> is H and the other is methyl.

30. (Previously Presented) The compound according to claim 29, in which R<sub>1</sub> and R<sub>2</sub> are in each case methyl, or one of the substituents R<sub>1</sub> and R<sub>2</sub> is H and the other is methyl.

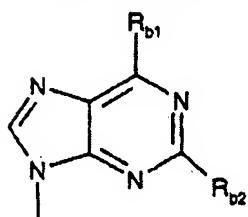
31. (Previously Presented) The compound according to claim 24, in which R<sub>3</sub> and R<sub>4</sub> are, independently of each other, H, -CH<sub>3</sub>, -CH<sub>2</sub>OH or -CH<sub>2</sub>-O-CH<sub>3</sub>.

32. (Previously Presented) The compound according to claim 24, in which n is 0.

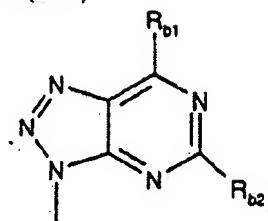
33. (Previously Presented) The compound according to claim 32, in which A is a radical of the formula -C(H)(R<sub>3</sub>)-N(R<sub>1</sub>)(R<sub>2</sub>), in which R<sub>3</sub> is H, and R<sub>1</sub> and R<sub>2</sub> are defined as in claim 24.

34. (Currently Amended) The compound according to claim 24, in which

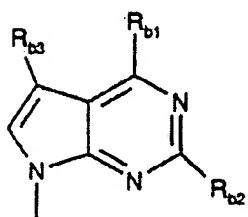
B' is a radical of any of the formula formulas (V1) to (V14)



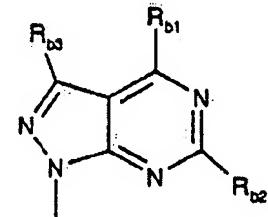
(V1),



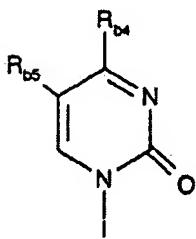
(V2),



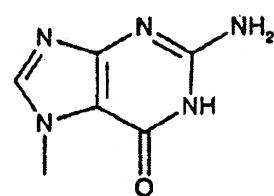
(V3),



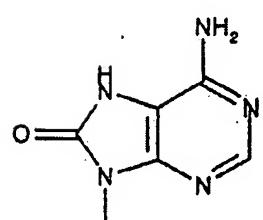
(V4),



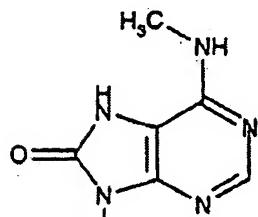
(V5),



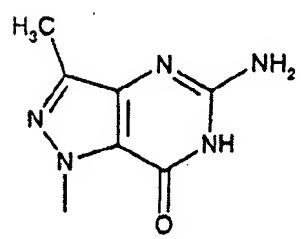
(V6),



(V7),



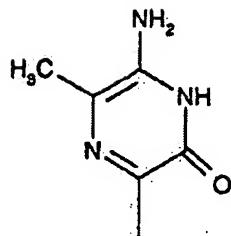
(V8),



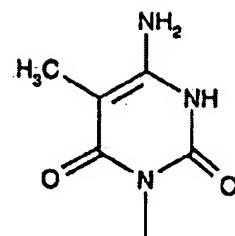
(V9),



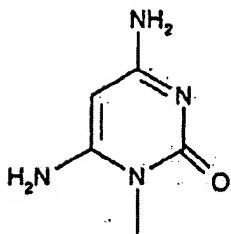
(V10),



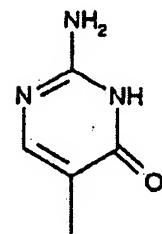
(V11),



(V12),



(V13),



(V14)

in which

$R_{b1}$  is  $-NH_2$ ,  $-SH$  or  $-OH$ ;

$R_{b2}$  is H,  $-NH_2$  or  $-OH$ ; and

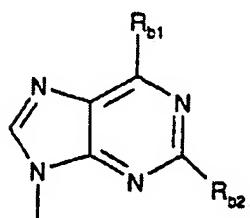
$R_{b3}$  is H, Br, I,  $-CN$ ,  $-C\equiv C-CH_3$ ,  $-C(O)NH_2$  or  $-CH_3$ ;

$R_{b4}$  is  $-NH_2$  or  $-OH$ ; and

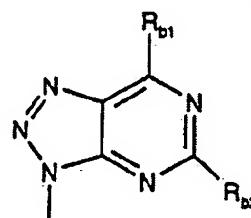
$R_{b5}$  is H, F, Br, I,  $-CN$ ,  $-C\equiv C-CH_3$ ,  $-C(O)NH_2$  or  $-CH_3$ ,

with exocyclic amino groups being present in unprotected or protected form.

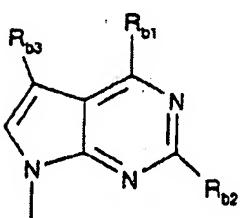
35. (Currently Amended) The compound according to claim 34, in which  $B'$  is a radical of any of the formula formulas (V1), (V2), (V3), (V4) or (V5)



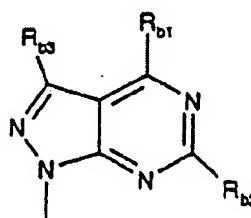
(V1),



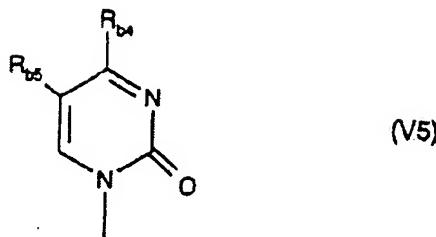
(V2),



(V3),



(V4),



in which

R<sub>b1</sub> is -NH<sub>2</sub>, -SH or -OH;

R<sub>b2</sub> is H, -NH<sub>2</sub> or -OH; and

R<sub>b3</sub> is H, Br, I, -CN, -C≡C-CH<sub>3</sub>, -C(O)NH<sub>2</sub> or -CH<sub>3</sub>;

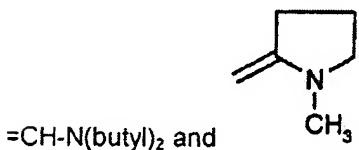
R<sub>b4</sub> is -NH<sub>2</sub> or -OH; and

R<sub>b5</sub> is H, F, Br, I, -CN, -C≡C-CH<sub>3</sub>, -C(O)NH<sub>2</sub> or -CH<sub>3</sub>,

with exocyclic amino groups being present in unprotected or protected form.

36. (Previously Presented) The compound according to claim 35, in which B' is selected from the group of the following radicals: xanthine, hypoxanthine, adenine, 2-aminoadenine, guanine, 6-thioguanine, uracil, thymine, cytosine, 5-methylcytosine, 5-propynyluracil, 5-fluorouracil and 5-propynylcytosine, with exocyclic amino groups being present in protected or unprotected form.

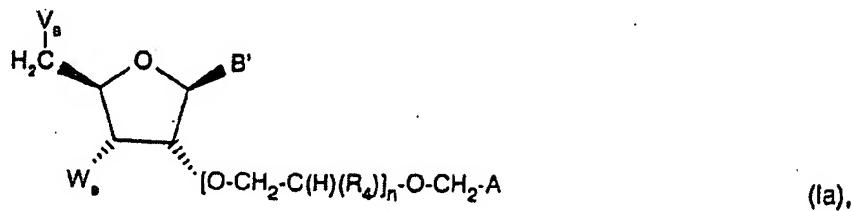
37. (Previously Presented) The compound according to claim 24, in which the protecting group for exocyclic amino groups of the nucleic acid base B' is selected from the following group: -C(O)CH<sub>3</sub>, -C(O)-CH(CH<sub>3</sub>)<sub>2</sub>, -C(O)-phenyl, -C(O)-CH<sub>2</sub>-O-phenyl, -C(O)-CH-p-(tert-butyl)phenyl, -C(O)-CH<sub>2</sub>-O-p-(tert-butyl)phenyl, -C(O)-CH<sub>2</sub>-O-p-(isopropyl)phenyl, =CH-N(CH<sub>3</sub>)<sub>2</sub>,



38. (Previously Presented) The compound according to claim 24, in which the protecting group for V<sub>a</sub> or W<sub>a</sub>, as a protected hydroxyl or amino group, is a trityl-type protecting group.

39. (Previously Presented) The compound according to claim 38, wherein the trityl-type protecting group is selected from the following group: trityl, 4-monomethoxytrityl, 4,4'-dimethoxytrityl and 4,4',4"-tris-tert-butyltrityl.

40. (Previously Presented) A process for preparing the compound of the formula (Ia) according to claim 24



in which  $V_a$ ,  $W_a$ ,  $A$  and  $B'$  are defined as in claim 24, and

(a)  $n$  is 0 and  $R_4$  is therefore absent,

which comprises reacting a compound of the formula (A)



in which  $V_a$  and  $W_a$  are, independently of each other, a protected hydroxyl or amino group, and  $B'$  is defined as above, with exocyclic amino groups in  $B'$  being protected by protecting groups, with a compound of the formula (B)



in which  $X$  is Cl, Br, I, tosyl-O or mesyl-O, and  $A$  is defined as above, with primary and secondary amino groups and primary hydroxyl groups in  $A$  being protected by protecting groups; or

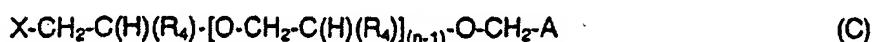
(b)  $R_4$  is H, -CH<sub>3</sub>, -CH<sub>2</sub>CH<sub>3</sub>, -CH<sub>2</sub>OH or -CH<sub>2</sub>-O-C<sub>1</sub>-C<sub>4</sub>alkyl and  $n$  is 1 or 2,

which process comprises reacting a compound of the formula (A)



in which  $V_a$  and  $W_a$  are, independently of each other, a protected hydroxyl or amino group, and  $B'$  is defined as above, with exocyclic amino groups in  $B'$  being protected by the protecting groups,

with a compound of the formula (C)



in which X is Cl, Sr, I, tosyl-O or mesyl-O, and R<sub>4</sub> and A are defined as above, with primary and secondary amino groups and primary hydroxyl groups in A being protected by protecting groups; or

(c) R<sub>4</sub> is H and n is 1 or 2,

which process comprises reacting a compound of the formula (D)



in which V<sub>a</sub> and W<sub>a</sub> are, independently of each other, a protected hydroxyl or amino group, B' is defined as above, with exocyclic amino groups in B' being protected by protecting groups, and L is a leaving group,

with a compound of the formula (E)



in which A is defined as above, and with primary and secondary amino groups and primary hydroxyl groups in A being protected by protecting groups; or

(d) n is 0 and R<sub>4</sub> is therefore absent, and A is a radical of the formula -C(H)(R<sub>3</sub>)-N(R<sub>1</sub>)(R<sub>2</sub>), which process comprises reacting a compound of the formula (D)



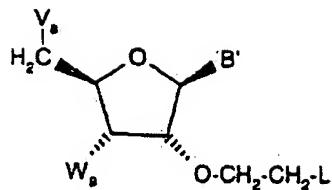
which is defined as above,

with a compound of the formula (F)



in which R<sub>1</sub>, R<sub>2</sub> or the group -N(R<sub>1</sub>)(R<sub>2</sub>) are defined as in Claim 24, and with functional groups in R<sub>1</sub> or R<sub>2</sub> being protected if necessary; or

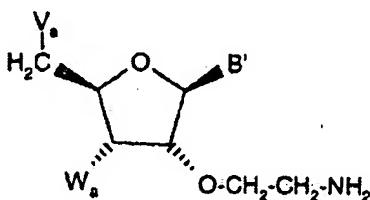
(e) n is 0 and R<sub>4</sub> is therefore absent and A is a radical of the formula -C(H)(R<sub>3</sub>)-N(R<sub>1</sub>)(R<sub>2</sub>), which process comprises reacting a compound of the formula (D)



(D),

which is defined as above,

with an azide and subsequent reduction, if necessary using a catalyst, to give a compound of the formula (G)



(G),

and, optionally, subjecting the compound of the formula (G) to further derivatization; within cases (a) to (e), protected groups subsequently being de-protected if necessary.

41. (Previously Presented) A process for preparing the oligonucleotide derivative according to claim 1,

the process comprising the following steps:

(i) converting a compound of the formula (la) according to claim 24 into a form suitable for oligonucleotide synthesis,

(ii) using the compound of the formula la according to claim 24, which compound is in a suitable form, in the oligonucleotide synthesis.

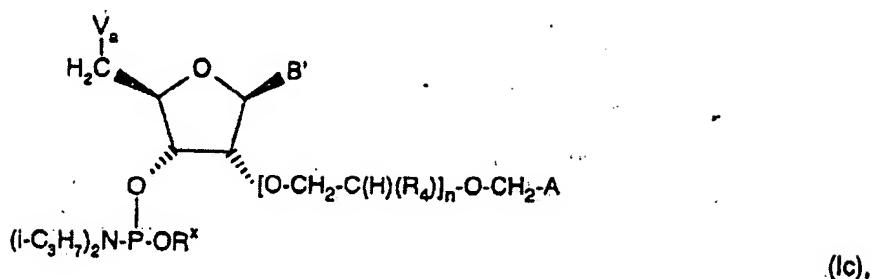
42. (Currently Amended) A method for producing an oligonucleotide, the method comprising the step of providing at least one compound of the formula (la) according to claim 24 in a form suitable as a nucleoside building block and joining the at least one compound in a sequence with one or more other nucleoside building blocks, such that the compounds of formula (la) are distributed randomly in the sequence.

43. (Currently Amended) A The method of claim 42, for providing wherein the oligonucleotide comprises an antisense oligonucleotide, the method comprising the step of providing an oligonucleotide derivative according to claim 1, the sequence of the oligonucleotide being the complement of a desired sequence.

44. (Currently Amended) The method oligonucleotide derivative according to claim 43, 12, wherein the oligonucleotide derivative which is as defined in claim 12 comprises an antisense oligonucleotide.

45. (Previously Presented) The oligonucleotide derivative according to claim 1, wherein the oligonucleotide derivative is a triplex-forming oligonucleotide.
46. (Previously Presented) The oligonucleotide derivative according to claim 45, wherein the oligonucleotide derivative is as defined in claim 11.
47. (Previously Presented) The oligonucleotide derivative according to claim 45, wherein the oligonucleotide derivative is as defined in claim 12.
48. (Original) A pharmaceutical composition, which comprises an oligonucleotide derivative according to claim 1, or a pharmaceutically tolerated salt thereof, in a pharmaceutically effective quantity, if desired together with a pharmaceutically tolerated excipient and/or auxiliary substance.
49. (Previously Presented) The pharmaceutical composition according to claim 48, which additionally comprises a customary cytostatic agent..
50. (Original) An oligonucleotide derivative according to claim 1, or a pharmaceutically tolerated salt thereof, for use in the therapeutic treatment of a mammalian subject, including man.
51. (Previously Presented) A process for preparing a composition, the process comprising the step of providing an oligonucleotide derivative according to claim 1 or a pharmaceutically acceptable salt thereof.
52. (Original) A process for the therapeutic treatment of a pathological state, in a mammalian subject including man, which is characterized by the expression of a protein or an RNA molecule, which comprises administering a pharmaceutical composition according to claim 48 to the mammalian subject.
53. (Original) A process for modulating the expression of a protein or an RNA molecule in a cell, which comprises bringing the cell, or a tissue or body fluid containing this cell, into contact with an oligonucleotide derivative according to claim 1 or a pharmaceutical composition according to claim 48.
54. (Previously Presented) A probe comprising the oligonucleotide derivative according to claim 1.
55. (Previously Presented) A therapeutic treatment of a mammalian subject, comprising the step of administering a composition comprising the compound of the formula (Ia) according to claim 24.

56. (Original) A compound of the formula (Ic)



in which  $V_a$ ,  $R_4$ , A and  $B'$  are defined as in claim 24, and  $R^x$  is a protecting group.

57. (Original) An oligonucleotide derivative according to claim 1, wherein the oligonucleotide derivative is essentially complementary to the region which extends from base position 2484 to base position 2503 of human c-raf mRNA.

58. (Currently Amended) An oligonucleotide derivative according to claim 57, wherein the oligonucleotide derivative possesses a base sequence according to SEQ.ID.NO.2 or a base sequence which is RNAlogous analogous thereto.

59. (Cancelled).

60. (Cancelled).

61. (Not Entered).

62. (Not Entered).